Course Description for Math 168: Geometry for Elementary and Middle School Teachers

Credit 3 hours. Prerequisite: Math 167. This course is designed to prepare the student to teach the geometry of the K-8 curriculum. Topics include basic concepts and properties of two- and three-dimensional space: perimeter, area, volume, parallelism, perpendicularity, congruence, similarity, transformations and constructions. This course may not be used to satisfy the General Education requirements.

Goal:

The overall goal of this course is to develop future elementary teachers who have an in-depth understanding of the

Objectives:

Students who successfully complete this course will be able to demonstrate their understanding by working problems and in-class presentations which include:

Each objective is coded with the COEHD Conceptual Framework (CK=content knowledge; KL=knowledge of learner; SM=strategies and methods; PS=professional standards; T=technology; D=diversity).

Students who successfully complete this course will be able to…

- accurately compute perimeter, area, surface area, and volume of geometric objects (CK)
- provide clear and concise rationales for geometric formulas involving perimeter, area, surface area, and volume (CK, PS)
- clearly perform measurements (CK, PS)
- solve and clearly explain exercises; display flexibility and often finds multiple approaches to a given task/problem; display a command of deductive reasoning (CK, KL, SM, PS)
- display positive attitude towards mathematics and exhibits the intellectual habits of mathematicians (KL, D)